METHOD AND SYSTEM FOR IMPLEMENTING VARIABLE X-RAY INTENSITY MODULATION SCHEMES FOR IMAGING SYSTEMS

Abstract of Disclosure

A method, system and medium for modulating the x-ray power of an imaging system so as to maintain a desired image noise in the imaging system is disclosed. In an exemplary embodiment, the method includes obtaining projection data, correcting the projection data responsive to beam hardening errors so as to create corrected projection data, processing the corrected projection data so as to create a plurality of emitter current values responsive to an imaging method and applying the emitter current values to the imaging system responsive to an object to be imaged. In another aspect, a method for determining an optimum emitter tube voltage for an imaging system includes characterizing the imaging system so as to determine a system water-equivalent path length responsive to a relative noise increase. An object water-equivalent path length is then determined and compared with the system water-equivalent path length so as to create a comparison result, allowing for the recommendation of the optimum emitter tube voltage responsive to the comparison result.

Figures